MONSTERS OF LONG AGO,

WHO SWAM, CRAWLED, AND PLEW WHEN BARTH WAS YOUNG.

In Their Many-Centuried Epoch They Munted Prey and Fought Throughout the Warm, Moist Land and Waters, or Browned on Giant Palms-To-day the Solid Rock, Once Clay, Reveals Their Giant Bones to the Wondering Gaze of Modern Man,

The lack of really popular works upon geology, and, indeed, all subjects whose names end in clogy, is greatly to be deplored. A work uron paleontology which in some measure supplies this need for popular information is the "Extinct Monsters," written by H. N. Hutchinson, an English scientist of some note, the author of several meritorious popular works on geology. Mr. Hutchinson has done his almost ploneer work well, as those who read his interesting pages will find. Its pictures show extinct monsters-huge, unsightly creatures such as one might think would rather populate the dreams of a victim of delirium tremens than any such earth as ours We have got into an atmosphere incredibly ancient and strange. We are no longer on the earth over which man has dominion. We are back in those dim eras when man was not. We are not breathing the pure, clear air which stirs under the blue of our sky, but an air warm, moist, and heavy with carbon, en veloping a strange landscape. There are great and violent earthquakes and volcanic erupand violent earthquakes and volcanic eruptions, there are deeper valleys, mightier rivers, oceans of enormous extent. The vegetation is rank and huge. The seas are alive, not with whales and with such sea creatures, great and smail, as to-day reward the enterprise of the fishermen, but with monst osities, some small, others of large size, lifting their long, shiny necks high above the waves, darting along the surface with great swiftness and leaving behind them a wake as of an ocean vessel. On the land strange forms bask in the flery sunshine or lurk in awull contentment under the leaves of gigantic terms and creepers.

These myriad forms of life died, became utterly extinct, even in species, gave way to other types, and finally to the type-we have to-day. But many of them, when they died, were not wholly destroyed. Their bodies sank in the ooze or were covered with the mould of the falling leaves. The flesh fell away from the bones and was disintegrated. But the bones remained: and gradually the ooze or mould hardened into rock. It took centuries, almost asons, of time to do this, but nature does not regard time; and now the scientists tear ing open the rocks have brought the bones to the surface, have not them together again, and have, in description, reclad them with flesh, and have made them walk and fly, and run, and eat, and fight flercely for existence, and have set them upon the earth at the time and with the surroundings they originally had. tions, there are vaster mountains, there are

When life first arose upon the seas, still hot and the land still quaking and baking over the internal fires then so near the surface, it was no-doubt in small and crude forms, Gradually the animal and vegetable kingdoms divided. In the animal kingdom there were invertebrates of which, except in the shell fish, we can have no traces to-day. In nature's museums there must be bones or nothing at all. After this, through the long eras, the fishes developed and the reptiles. When these had divided into countless species, there appeared among them, fostered by what forces we know not, huge creatures, partly fish and partly reptile. From the vast numbers of skeletons and fragments of skeletons of these monsters, the seas must have swarmed with them.

The first of these for our menagerie is the fish lizard, known pretty well as the icthyosaurus. This monster is regarded by naturalists as one of the most monstrous ever discovered. It possessed the snout of a dolohin.



the testh of a crocodile, the head of a lizard, the paddles of a whale, and the vertebre of a fish. It was a powerful creature that grew to he snywhere from ten feet to forty feet in length. Its tail was its chief means of propulsion, but that, in process of time, was greatly aided by two pairs of paddles. Its skin was smooth or slightly wrinkled and it had no scales. The icthyosaurus breathed with lungs, and not with gills, but as it was cold blooded and small brained, it could keep under water a very long time. But its eyes were its most interesting feature. They were of great size, and by an arrangement of bony plates could be so focussed that the icthyosaurus could make itself near or far sighted, as it chose. It could also see where there was almost no light, as in ocean depths, or at the surface. If must have been able to project its long narrow body through the water very swiftly in pursuit of the smaller fish of those remote dars. But the fish lizards themselves also had enemies, and, after a few tens of thousands of years, they disappeared or merged into other types better adapted to the changed conditions.

Existing at the same time with the fish lizards or icthyosaurs were the sea lizards or plesiosaurs. Of this strange creature Cuvier said that it was the most monstrous thing that ever lived, so far as man had discovered. It had the head of a lizard and the testh of a crecodille. Then came a neck of enormous length, like a huge serpent. The TOTHYOSAURUS-PISH LIZARD.



trunk and tail were similar to and of the bulk of some enormous quadruped. But instead of legs it had paddles the paddles of a whale. This reptile probably swam upon or near the surface, arching back its long neck like a swan, occasionally durting it down at a fish which happened to float within its reach. It may perhaps have lurked in shoal water along the coast, concealed among the scawced, and raising its nostrils to a level with the surface from a considerable depth may have found a secure retreat from the assaults of enemies. These creatures, in the full glory of their race, were selden less than twenty feet long and often thirty or forty feet long.

Next we come to the groups of sea serpents, some of them closely related to the sea ilizards, others quite distinct. In the order of time it is thought that all these belong to a much later period than fish lizards or sea lizards, but this is still an open question. Furthermore, in the opinion of some geologists it is THE PLESIOSAUBUS.



GROUP OF SEA SERPENTS. GROUP OF SEA SERPINES.

barely possible that one of these groups may have survived to the present day and that the sea serpent so often seen and as often disputed is a solitary descended from these monsters of the seas in the far cretaceous period.

Of these ancient sea serpents some families were only about twenty-live feet long, others had fifty feet as their greatest length, while still others Siretched their great codies, as bulky as an elephant's in the thickest part, to a length of seventy-live feet and more. Like the anake bird of Florida, this reptile probably



and scales found in the position of its stomach.

Among the fossils of this mesozoic or reptilian ers have been found the remains of thousands upon thousands of the various success and genus of flying lizards or pterodactyls. These flying lizards had wings, not true wings, but such excellent substitutes as those possessed by the bat. Some had teeth and others had not. Some could fly or walk or swim, as they chose, while others could only fly and hop. Some ate lish, others insects and fruits. Some were no larger than sparrows, while others had wings that expanded to an extreme width of twenty-flye feet or more. Some had very respectable looking heads. Others were hideously ugly, as royoliting as a gigantic bat, with the added herror of an unsightly bill of great length and buige. It must be noted also that the most of these creatures had the power of walking on all fours with the wings folded alongside. Certainly nothing could have been more uncanny than the sight of a lot of creatures, each about the size of a huge dog, walking along the earth and all at once rising on their had legs, apreading a great expanse of sail on either side, and making off through the air.

But the most amazing types of this remote period called the mesozoic age and the age of reptiles were the dinosaurs. The vigorous fancy of primitive man conjured some fright-ful shapes of dragon and beast. But nature



DINOSAUES-THE BROYTONAUBUL

prince the end of the service of the service of the mighty members of this strange iamily. As the dinosaurs were reptiles, they no doubt had all the revolting characteristics, the small intelligence, the cunning, the undulating motions, and the feroclous malignity. These things make the snakes and crocodies and alligators of to-day the most generally dreaded and shunned of created things, the horror of man and beast alike. While there were, as has been shown, reptiles in this mesozoic age that cast into insignificance all known reptiles these in turn were preyed upon by the great dinosaurs.

The dinosaurs belonged in almost every part of the world. Their skoletons are found wherever rocks of the mesozoic age have been turned up, and they, like all created things, were adapted to the peculiar conditions by which they were surrounded. While some were closely allied to the sea serpents, sea



CARNIVOROUS DINOSAUR.

caenivorous dinosaur.

lizards, and fish lizards, others resembled various mammals, and still others were so nearly akin to such birds as the ostrich and the emu that many scientists hold that these birds are the descendants of dinosaurs. Mr. Hutchinson classes them under three divisions, the lizard-footed dinosaurs, and the bird-footed dinosaurs. This division is based upon the appearance of the tracks left in the soit soil of that day, which hardened into stone and thus preserved the impressions to us. The first of the lizard-footed dinosaurs, which Mr. Hutchinson considers is the brontosaurus, a vegetable-feeding lizard that was, on the average, sixty feet long and must have weighed at least twenty tons. twenty tons.

The small size of its brain cavity shows that
it was a stupid, slow-moving creature. It had
no covering of scales or spines, and no offen-



sive abilities, apparently. In the opinion of Prof. Marsh it was more or less amphibious and fed upon aquatic plants. He notes that its remains are generally found where it had in all probability become mired. Many of its racks are preserved, some of these footprints being a square yard in extent. For its defence against enemies it is possible that its great tail could be swung with force, and it is probable that those mighty thigh bones, which often were six feet long and more, had muscles of great power bound to them, by means of which a terrific kick or blow could be delivered. While sixty feet was its average length, there have been found skeletons of this kind IGUANADON.



SCELIDOSAURUS. SCELIDOSAURUS.

of dinosaur that must have been over eighty feet long. From the neculiar structure of the head and forequarters, it is assumed that they sometimes sat upright upon their haunches. In such a position a dinosaur eighty feet long would have been thirty feet high, or as high as a modern three-story house.

The second group of dinosaurs, the beast-footed, were not so large as the first group, and were entirely different in their habits. They were the lions and tigers of their age, fierce, ravenous beasts of prey. Their skeleons show most plainly that they were con-



HORNED DINOSAUE.

BORNED DINOSAUE.

Britished for pouncing upon other animals and tearing them to pieces. These dinosaurs walked on their hind legs most of the time, hobling their short forelers in the air, somewhat after the fashion of the kangaroa. Their bones were hollow and the forefoot of the body was trivial compared to the haunches. Their average length was about twenty-live feet, and the distance between their tracks, which would mean the length of their step, was about four or five feet. Each track was about twenty inches long.

The third group of dinosaurs, the bird footed, is the most interesting, and is the last discovered by science. Of these the first to come to light was the iguanation, a mighty HORNED DINOSAUP.

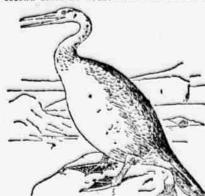


smooth-skinned creature, thirty feet long or more. It levied upon the leaves of trees, and walked upon its hind feet, this despite the fact that its body was far larger than the body of the largest elephant.

Another of this same general family was the secilobosaurus, noted for the immense power of its hind legs. In size it was, in all probability, about the same as the iguanadon. It had spines and plates of armor upon its back, which kept off the hind legs were not available. A swish from its tail was like a cut from a lash of nettles. The pelacanthus a near relation probably of the seelidosaurus, was still letter protected, for it had its loing was been found its banks it have wandered far from the localities in which the bases have been found its banks it have it have wandered far from tand, and that many kinds of lene which rose at regular intervals into sharp spikes.

But the most curiously armored creature that has over been discovered was the slego-

saurca, which was a native of the western part of this country in the masozoic age. Projecting from the back were bony plates from two to three feet in diameter, and its apines, the most powerful animal spines ever found, were sometimes over two feet long. This creature had two brains, one in its small head and the other in the haunches. The second brain no doubt had the business of



directing the movements of the great hind-quarters and, when necessary, the swinging of that mighty tail with its four pairs of strong, sharp spines. This kind of creature was, it is believed, thirty feet long and up-ward. Its weight must have been very great, and its height was certainly that of an ordi-nary elephant.

and its height was certainly that of an ordinary elephant.

At the close of his last chapter on dinosaura Mr. Hutchinson introduces a sketch of a great bird that lived in this age of reptiles, and that was, in all probability related to the dinosaurs. This bird is called the gigantic diver, its length being about six feet. It is most interesting to us, because while it was assuredly a bird it also had teeth, not a rare thing among birds of this strange mesozoic age. Not one toothed bird has suvvived. There were many points of resemblance between birds and reptiles as they were known in this mesozoic period, however little there may be nowadays.

HII.

From the monsters of the age of reptiles to the monsters that made terrible the landscapes in the age of mammals is a long sten, and not a satisfactory one from the view point of the geologist. For geology has no explanation of the transition. It knows that in all parts of the world thus far explored the record of the doings of nature between the two ages are destroyed, but how they were destroyed it cannot tell. In the rocks of the manimalian



TINOCERAS INGENS.

age the huge skeleton of monstrous forms of reptile life are no longer found. A few great reptiles remain in this age, but they more nearly resemble the reptiles as we know them than those mighty creatures whose lootprints sank indelibly into the soil of the mesozole age. In the reptilina age mammals were represented by a few wenk little creatures, which since have hid in terror even from most of the bird-like reptiles, to which they would have fallen easy prey. But in the new age the mammal is the lord of creation. Mighty creatures of mammalian types, endowed with intelligence which no reptile ever had, stalked through the forests, swam the rivers and



BRONTOPS.

lakes, and dotted the plains with forms. America and India have offered the richest rewards for the geologists investigating the life of this period. Mr. Hutchinson presents two great American monsters.

"American geologists tell us." says Mr. Hutchinson. "that a long time ago there was a great tropical lake in the Wyoming Torritory, on the borders of which roamed amid luxuriant vegetation a large number of strangs and primitive quadrupeds. The most wonderful group of animals that haunted the shores of this lake was the dinocerata. The name implies that they were terrible horned monsters." The most formidable of these was the Tinoceras ingens. It was about twelve feet long, without the tail, and weighed between two and



SIVATHERIUM.

threetons. It resembled both the rhinoceros and the elephant. Its legs were elephantine and its feet may have been covered with soft pads. But its body seems like the body both of the rhinoceros and the hippopotamus. It had six bony knots on its skull, which served as horns. It was one of those types which geologists call generalized, presenting characteristics of many groups of our quadrupeds. Mr. Hutchinson also devotes a considerable space to the "lad Lands," that strange Western region which has delighted so many geologists. In these and several other like regions in various parts of the world will no doubt be found many a missing link in the chain of life, many an off-pring of nature as strange and as terricle as those already revealed.

After the dinocerata lived another large family of American mammals, to which the name of broatops has been given. They were near ancesters of the rhinoceras. They were lest long, and about eight feet high. "The limbs," says Mr. Hutchinson, "are shorter than those of the elephant, which it nearly equalled in size. As in the tapir, there were four toes to the front limbs and three to the



bind limbs. It was probably provided with an elongated flexible nose like that of the tapir."

In India there is a region which, like the "Bad Lands," is rich in the remains of extinct monsters. From this region, the "Livalik lills," many skeletons and paris of skeletons of the mammalian age have been brought to England, classified and renovated. From among these Mr. Hutchinson has selected two, the sivatherium and the colossechelys. The sivatherium is unlike anything now living. Although at first glence it resembles some form of deed, so many things immediately present themselves in contradiction of this that the animal is soon given upas a mystery. It had two pairs of horns, like one kind of antelope, teeth like a giraffe, and a nose like a tapir.

In both the "Bad Lands" and the Livalik Hills, aside from the unusual forms, there are the remains of thousands and thousands of animals and reptiles nearly skin to the animals and reptiles of to-day. In fact, nearly every one of the species we have to-day was then represented by lour or five times as many genera as have survived. The earth is poor to-day in all the lower forms of life as compared to what it was a hundred thousand years ago. South America has not contributed many peculiar forms of sucient life. The two most noted are also most curious—the giant sloth and the giant armadillo that once lived in the famous lampas region. One specimen of the megatherium, or giant sloth, shows "an animal eighteen feet in length, with bones more massive than those of the elephant. For instance, the thigh bone is nearly thicket the thickness of the same bone in the largest of existing elephants, the circumference being equal to the entire length.

"In the fore part of the body the skeleton is GIANT BLOTH.

when two years old. He has been actively identified with rife shooting as a member of the Zettler and Williamsburgh clubs, and wos the championship of the former organization for all-round open-air shooting last year.

On Sept. 17, 1881, he defeated theorge Schilcht at Union Hill, in a 100-shot match, at 200 yards. In the contest he did not miss the buil'seeye once, and the remarkable target still forms a conspicuous ornament over the mantelpiece at the Zettler rifle gallery, he used a 22-caliore Bailard rifle with Hemington barrel, loaded with United States Cartridge Company 22-shot.

comparatively slender, but the hindquarters TAMING WILD ELEPHANTS.



GIANT ARMADILLO.

massive. Prof. Owen has proved that this cumprous creature, instead of climbing un trees as modern sloths do, actually nulled down the tree bodily or broke it short off above the ground, sitting upon its huge haunches and tail as upon a tripod while it grasped the trunk in its long, powerful arms."

The glyptodon, or glant armadille, divided dominion with the giant sloth in South America in the mammalian age. This great armored creature, which reached a length of eight feet and even more, had not only a great shield upon its tack, but another upon its head and another upon its tail. It survives to the present day, as does the sloth, in representatives of much smaller size and of pitiful comparative strength.

In this last group of monsters we come still more nearly to the types of mammals as they exist to-day. All these are on a much larger scale than our types of the same families, but there is no characteristic that is in any espacial sense monstrous or unnatural, except that of bulk. Indeed, all these last monsters either lived closs up to the age of man or were known and hunted by primitive man.

The first of these, the mammoth, is the beat known of all extinct monsters, because of its interesting living type-relative, the elephant. The beast was from twolve to twenty-five feet in height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height, with tusks from nine to twelve feet inn height.



temperate and Arctic regions. He seems to have been drawn gradually northward, and to have been drawn gradually northward, and to have become extinct on the northern shores of Siberia. Allied to the mammoth and also to the elephant was the mastosion, which was almost as nightly as the mammoth. The mastodon flourished long before the mammoth, and in all probability lasted long after the last mammoth had perished. The North American Indians have many traditions as to an animal that resembled the mastodon, and as there seems to be no other way of explaining it, the scientists are inclined to believe that the mastodons were roaming the American continent at least far into the age of man.

The woully rhinoceros, was a contemporary of the mammoth, and, like the mammoth, was so protected that it could go into the outer regions. Its remains have been found in the



woolly reflected. Sherian soil, and even parts of its body, fairly well preserved by the ice. It was about half as large again as even the huge two-horned rhineceros of the present day. The great Irish deer, so called because the first specimen was found in Ireland, was a fine figure in the age of mammals, with his great antiers, measuring eight feet from tip to tip, just twice the average distance between the tips of the antiera of the moose. He stood ten feet or thereabouts from the ground to the top



MOA BIRDS. of his antiers. Then there were the Moa birds, ten and twelve feet high, that ran in Australasia, especially in New Zealand, almost to the time of living men; the great sea cow, nine-teen feet long and more, which has vanished within the century, and many other great creatures of the same general appearance as types that now exist.

A CRACK GALLERY MARKSMAN. F. C. Ross, Who Beat Champion Dorrier and Other Rifle Experts,

P. C. Ross, who created such a sensation by scoring 240 points out of a possible 250, and defeating champion M. Dorrier at the recent Zettler gallery shoot, has been a prominent member of rifle circles for the past three years. During most of this time he has en-



joyed an enviable reputation as a dangerous opponent at open-air ranges, but was never considered on a par with Dorrier in gallers

Ross was born at Baden. Germany, thirty years ago, and was brought to this country



A FINE TARGET.

NOVEL METHOD OF CAPTURING THE ANIMALS IN INDO-CHINA. Dr. Rosert Describes a Hunt in Which He Took Part-Entangling the Feet of the Game in Loops Dragged Along the Ground -Reducing the Game to Ducility-The Explorer's Adventure to the Jungle.

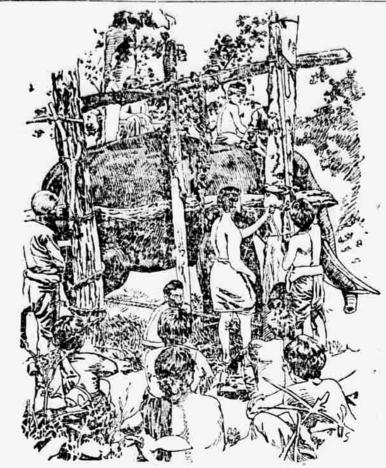
Dr. C. W. Rosset, the traveller and explorer. Fro is well known for his contributions to ethnography, is now in this city. He was long in the service of Gen. Gordon in the Egyptian Soudan, and of inte years he has been explor-ing in the virgin field between Annam and the great Mekong River, where he has brought to light four tribes whose existence was barely known before he made them a study. Dr. Rosset contributes to THE SUN this account of wild elephant catching as practised by one of these tribes in Indo-China: "The Benongs live about midway between

the Mekong Elver and the Annamite coast in mountainous, wooded regions. They hunt the

last we reached an open, where we found about twenty wild elephants, young and old, which gave vent to their surprises and fright by violent frumpetings.

"We rode with the utmost speed right into the herd. The guides, in order to spur their animals to the utmost speed, knocked upon their skulls with iron spikes, which drew blood. The purpose was to separate one of the young elephants from the herd. I wish to say here that wild elephants in fighting with tame ones are no cowards, but they tehave with the greatest caution, because they seem to be aware of the superiority of opponents guided by human telngs. We soon succeeded in pushing to one side a young animal and its mother, and immediately several of our tame clephants tried to separate them by pushing in between them. The mother tried to defend herself by blows with her trunk, which, however, our men knew how to avoid. At last we succeeded in separating the two animals.

The capturers, who stood upoght on the backs of their elephants, now tried to drag the books of their elephants, now tried to drag the backs of their elephants, now tried to drag the backs of their elephants, now tried to drag the backs of their elephants, now tried to drag the backs of their elephants, now tried to drag the backs of their elephants, now tried to drag the backs of their elephants, now tried to drag the capturers and the guide. The young sephant telt his danger and tried to flee, While the greater part of the men tried to keep the herd in check, the rest devoted themselves to completely securing the captured beast. The fettered capture, followed by the lucky capturer on his elephant, plunged to the right and left,



TAMING A WILD ELEIBANT.

elephant to obtain Ivory and also to capture and tame the young animals. A great deal has been written about elephant hunting, but nothing, I believe, about the method of the Benongs. among whom I was the first European to live for any considerable time. On March 30, 1801, I was in the Benong village of Pumpia, making ethnological collections and treating many sick natives. About that time a Cambodian mandarin arrived for elephant hunting. Although the natives protested that the presence of a Christian might render the hunt unsuccessful the Cambodian, juffuenced no doubt by some presents I made him, at last consent-

ed to my participating in the hunt. "Ten aged and completely tamed elephants were loaded with the implements for capturing their wild relations and with baskets of provisions. An adequate number of men were got together. We then started for a region where wild elephants are numerous. Our animals moved along in Indian file, and the finest of the lot, on which the mandarin and I were seated, brought up the rear. The other elephants had to clear the way for us, which they did by breaking off the branches of trees with On we went over hill and dale and rivers until we found a fresh elephant trail, recognizable by the recent breaking off

of branches and the trodden herbage. "A halt was made. The animals were unsaddled and the baggage was taken off and left in charge of a number of men. The rest of us were then ready for the hunt. There was nothing left on the elephants except a cane about the thickness of a finger, which was wound round their bodies to give the riders some hold during the violent and irregular motions of the animals. It was only with difficulty that I could prevail upon the mandarin to allow me to take with me my elephant rifles. Wrapped

to take with me my elephant ritles. Wrapped up in ox hides, these rifles were fastened to the elephant I rode.

"Lachelephant I rode.
"Lachelephant was ridden by two men. One, who was called the capturer, rode or stood on its back. The other man was the guide, and he sat right behind the neck of the anusal. The capturer had a long bamboo stick which reached to the ground, and to the lower end of which was attached a loop made of twisted coof fibre. This loop was attached to a long line made of hide, and held by the substruct at about the middle and by the guide at its other end.

"We advanced with all speed on the trail. Every moment I was in danger of being huried to the good by the guides, and the mandarin knew how to keep out of the way of danger. Often I saw our guide lie down that behind the neck of his animal, and the capturer take hold of its tail and ride on the handeless of the clephant so a not to be semped of. I expected every moment to be knocked to the ground. I managed to keep my seat, however, and at

A WRESTLING LION.

Rather a Dangerous Sport, but it Pleases the Crowd.

Roused to emulation by the instantaneous success of the boxing kang aroo, London variety managers have been hustling to unearth a rival athletic novelty. The Oxford Theatre of Varieties believes it has at length filled the bill, and now expends its display type on a wrestling lion.
The Sporting Life describes the first appear-

ance of the leoning star as follows:
When the certain was drawn up the nea was dissovered in a huge cage, making the usual parade from end to she of his prison house permise to his species. In a trief speech Mr. C. R. Brigaten, the courteons manager, stated that the hon was bred in the forest, in a brief speech Mr. C. ii. Brighten, the courteous manager, stated that the hon was bred in the forest, and was braight to England four years are. He has been two years under the eare of Amonsa, who is a West Initian and blace, as chang, with pleaning eye, and teeth as what as the drived more, standing 5 teet 10% inches, and weighting close on 15 store, he looks the personneation of strench and courses. Questly he entered the healt case, and, a sign teel hold in the time has been to the looks care, and, as a sign teels had in the time tand tasking, all manager than the look had in the time tand tasking, all manager than the first task was given in larger of his majesty the hon (whose name, by the way, is Prince, who stimely, by superior weight in the upper part of ha heds, berief his opponent down dat on his look. Acain the couple rot into grips the hon apparantly very unwilling), this time. After a little inaneauvring Alex attempted to the interest of the locate on his bank, but finded tamentably, both failing of the locate on his bank, but finded tamentably, both failing side by side. Consequently a long fail was recorded for a while introduced the side of his history cleverly by a angularly well-executed twen, the history cleverly by a angularly well-executed twen, who very adready back-hurled the leaves of the contents of his atomach. After that Prince Bred a place which was sustended from the roof of the cage, and then alexand the industry action in the locate of the wrestling Alex opened the laws of the industry and the hamb, that performance in his beat in the annual and tenton any own on the floor together not positive, could be hamb, that performance in his back and the locate of the laws and the locate of the laws and the locate of the locate of the laws and the locate of the locate of the laws and the locate of the locate of the laws and the locate of the locate of the laws that the locate of the laws the locate of the laws that he could take his own part. Alex a mouth, and semmed the college of th

From the Courier-Journal. There were some tweaty-five men in the mob and they were determined on putting an end to the criminal, and there is no doubt but they "lost him" on their return home.

Then it was hunted about in a circle until it broke down quite exhausted. The servants surrounded it, imped to the ground, and cautiously creening from underneath their animals, fettered with hide thongs attached to their capturing implements the legs of the broken-down creature, and made the thongs fast to the trunks o trees, so that the captive could no longer hudge.

"The animal was kept in that position for several days. The first day it had nothing to eat or drink. The second day it received some water. On the third day a few morsels of food were given to it, and it segan to become docite. Then it allowed likes to be led by its tame companions, which tried to console it by caressing it with their trunks. On the eighth day of its cardivity the youngster was so far tamed that any one could approach it.

"From this description it might appear that the elephant of Indo-China is a harmless animal. This is not the case. When irritated by a wound it becomes very dancerous, especially to white men. While the elephant of In lia takes to flight at the first shot, it its wound is not morful, the Indo-Chinese animal in once attacks the hunter. I had an adventure of this sort right after the hunt I have described.

"I wanted to show the Cambodians what a Europe an hunter can do, and I therefore requested the mandarin to allow me to try a shot at the wild heed, which meantime had retired into the forest. Only after my repeated assurances that I should not hold him responsible for the conseniences, the mandarin gave his conseni. I took my rifle and some ammunition, not ready for firing, and ordered my cambodian servant to follow me at a distance with my reserve double-barrelled rifle. Entering the forest. I saw three elephants at a distance of several yards, and lost conseinances, the mandarin gave him young member of the conseinances of my gun to see the elephant. Then I suddenly reit something graze my face, and I was hurled a distance of several yards, and lost consciousness. When I I recovered the Cambodians stood ar

DEVOURED BY JACKALS.

The Awful Fate of Three Men on the Great Colorado Desert, From the can Francisco Examiner.

Los Angeles, Feb. 10. - John Lang is one of the largest cattle men on the Colorado desert. He last year discovered water about forty miles south of Indian Wells and has created a very large cattle ranch there. He has just arrived here from his isolated home, and told of a find of three victims of the desert whose identity may never be disclosed.

About five weeks ago he and a couple of his

vaqueros were riding along the old telegraph road leading from San Diego to Yuma, when. at a short distance from the road, he descried the wreck of a wagon. The party were in search of estrays from their herds, so they search of estrays from their herds, so they started from the trail and rode toward the wagon, which was completely broken down.

The sight that met their eyes was a sickening one, for the skeletons of three men were scattered about the region, their clothing torn into shreds by the ravenous covotes and vultures. There was not a scrap of paper in the peckels by which they could be identified, because there were no lockets left. But the box of the wagon bore status of blood, half obliterated by the rain, showing that the unfortunate men had gathered into the box for safety until they became too exhausted to fight the ravenous jackais, which there them limb from limb.

But the voice from the bush is never silenced. Even from the desert the voice of expiring nature cries aloud to heaven with its laintest breath. On a card facked to the bed of the wagon was distinctly written in a hand that had grown tremulous with the pangs of lamine the words, "We are lost. There is no water on the telegraph road." And this pathetic message from neon whose three while skulls har ideaching in the stunted grass leaded the wagon was all that came back from them to the world that had closed on them forever.

"One of these men was a fat man." said Mr. Lang, "and the other two were thin. You can always tell the hones of a fat man because they contain a larger percentage of iron, which turns reddish brown after the flesh is removed and the hones have been exposed to the air. These mon were less than four miles from a fairly good supply of water, but they did not know it."

They had evidently started on a prospecting tour from San Diego or Yuma. It is hard to say which and, from the appearance of the hones and partial obliteration of the blood stains on the wagon, had been dead about five months.

No expokes nor harness could be found anywhere near the wagon, nor were there any weapons in sight. As people do not travel on such errands without weapons to aid them in procuring food, as well as for defence against Indians, it is quite likely started from the trail and rode toward the

IN THE TROPICS.

INDIA RUBBER TREES.

Eforts of the Brazilian Government to Bring Them Under Plantation Culture. A recent report of the Brazilian Department of Agriculture deplores the rapid destruction of what were at one time looked upon as inexhaustible forests of India runber trees, and suggests as a remedy that plantations for the cultivation of the tree be established, showing at the same time, by statistics, the enormous profits that would accrue to the planter. In view of the fact that Central and South Amerlea, and especially Brazil, are the main territories upon which the commercial world relies for its supply of crude rubber, this official statement from the Brazilian Department of Agriculture becomes worthy of consideration. The large tracts of rubber forests in the vallev of the lower Amazon have been, up to the present time, especially prolitable, because

they have required the investment of no capi-

tal and the employment of but little labor.

The swamp land, where the rubber tree thrives, requires no cultivation and demands no care. The tree propagates itself and grows rapidly. All that is required for the collection of a his vest is to send men into the forest to base to catch the milk. The causes assigned for the depletion of the forests are the greed of the lessees of the trees and the carciersness of the labouers. No tree should be blazed more than three times in one day, and great care should be taken in this so that the hatchest may not cut tigrough to the trunk itself. If the tree is thus wounded, it would not have the blazing of the milk-yielding bark does no harm, and one tree will produce rubber for fully fifty years. If the yield is loreed however, the blazing of the milk-yielding bark does no harm, and one tree will produce rubber for fully fifty years. If the yield is loreed however, by too frequent demands upon one tree, the crop becomes less every year, and in a shout time falls utterly.

It is thus evident that an almost inexhaustible supply of rubber may be seriously injured between for the barnet so determined the supply of rubber may be seriously injured by the active with no thought of future production. Another source of injury is the posething by the natives, who wander through the swamps of the upper Amazon, sapping rubber trees for their own benefit, and selling their stolen milk to the traders on the ocast.

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Largely on account of this labor problem the South Americans have given up the idea of laying out rubber tree plantations. They look now to the more energetic North Americans to come down there and invest their capital and energy in the development of the rubber industry. As an inducement in this direction and to show what could be done the local Agricultural Bureau of Fomento has drawn up estimates to show what it would cost to establish a plantation. It is estimated that a crop could be gathered twenty years after the trees are transplanted, and that the investment of Sill, covering all expenses per acreduring that period, would assure a return, after twenty years, of at least Side per year for each acre planted. But this calculation assumes that the labor problem has been solved in some way, efficie that high wages may induce the indians to work steadily or that coolies may be imported and prove able to stand the climate.

Perhaps an easier way to establish a plantation would be to purchase a tract of virgin forest in the Amazon Valley, to clear away the old trees and those of other species, and then to care for the grown rubber trees already there. Such a proceeding would take about five years only, but would cost fulls four times as much as the first plan. The cost of the swamp land would be small, but an acre of wild forest would produce only one-fifth as much as an equal area under cutivation. But even \$100 net profit would make fair interest on the investment. In either of these cases certain stringent laws would have to be passed and enferced to be revent maranding natives from killing the cultivated trees in their thieving invasions.

THE FOUNDING OF ARBOR DAY. How Sterling Morton Caused Nebraska to Be Planted with Trees,

It is twenty-one years since Sterling Morton invented Arbor Day. He was then a member of the Nebraska State Board of Agriculture. and he offered a resolution setting apart April 10, 1872, as tree-planting day. There were some members of the Board who contended for the name "sylvan day." but Mr. Morton talked them out of this title. The resolution as finally adopted recommended that the people throughout the State plant trees on the day named, and offered, in the name of the

ple throughout the State plant trees on the day named, and offered, in the name of the Board, a prize of \$100 to the agricultural society of that cannot when should plant properly the largest number of trees. To the person planting the largest number of trees. To the person planting the largest number of trees. To the person planting the largest number of trees. To the person planting the largest number of trees. The Board requested the newscapers to keep this resolution before their readers, and the newscaping researched to generously that more than 1, 200,000 trees were blanted throughout Netraska on the first Arbor Pas.

Next year the day was observed with increased interest, and in 1874 the Governor officially proclaimed the second Wednesday of April as Arbor Pay for Nebraska. The day was named thus by proclaimation until 1885, when the legislature designated April 22 as Arbor Pay, and a heliday. Since that time a provision has been inserted in the fonsituation of Nebraska declaring that "the increased value of lands, by reason of five leness, fruit and forest trees grown and cultivated thereon, shall not be taken into account in the assessment thereof." In addition to this Nebraska has enacted many statutory provisions touching align the planting of trees. One directs the cornorate authorities of trees. One directs the cornorate authorities of authorities to make additional assessments for taxation upon lands benefited by such planting. Another section of the law provides for the blanting of trees not more than twenty feet apart then each side of one-fourth of the streets in every city and village of Nebraska. Most persons acquainted with the needs of reality valuable shade frees realize that such trees should be planted a good deal further apart than the distance thus indicated by law, one result of all this legislation, and of the premiums offered each year by the state Board of Agriculture, has been the association and of the premiums offered each year by the state Board of Agriculture, has been the aso